

Appln. No. 09/865,393
Response Dated Feb. 10, 2005
Office Action dated Nov. 10, 2004
Docket No. 6169-203

IBM Docket No.: BOC9-2000-0067

Amendments to Claims:

This listing of claims will replace all prior versions and listings of claims in the instant application:

Listing of Claims:

1. (Currently Amended) A method for post-analyzing and sequentially visualizing a plurality of predefined metrics in a stored dynamic data space, comprising:

storing in a datastore, values corresponding to predefined metrics received from an agent, each of said values representing a characteristic of one of a plurality of entities in a data space, wherein data for temporally coordinating interactions among the entities is also stored in the datastore, wherein said data for temporally coordinating interactions comprises for each of said values an identifier used to record a time at which the corresponding value was measured;

detecting an analysis event that indicates that a post-performance analysis is to be performed for a designated time;

determining a time range applicable for the designated time;

retrieving said stored values from said datastore that have associated identifiers specifying times within the determined time range; and

displaying said retrieved values for selected ones of said predefined metrics for sequential viewing, on a graphical display, previously occurring network events involving the entities, wherein the displaying step utilizes previously stored temporal data to display interactions among at least a portion of the entities in a time sequenced manner.

2. (Currently Amended) The method according to claim 1, said determining step further comprising the steps of:

determining a starting time for the time range and an ending time for the time range.

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~~wherein said retrieving step, comprises:~~
~~accessing values in said datastore;~~
~~determining a starting time and an ending time of said stored values to be retrieved;~~
and
~~acquiring said sequentially stored values from said starting time to said ending time.~~

3. (Previously Presented) The method according to claim 1, wherein an interface utilized by the displaying step to display the previously occurring network events is configured to display network events in real-time.

4. (Previously Presented) The method according to claim 1, further comprising controlling said sequentially changing graphical display by selecting a playback function from the group consisting of playing, forwarding, fast forwarding, rewinding, fast rewinding, pausing, stepping and stopping.

5. (Currently Amended) A method for post-analyzing and visualizing predefined metrics for at least one of a plurality of distributed components in a heterogeneous system, the method comprising:

at least one software agent retrieving and processing predefined metrics, each metric representing a characteristic of a component in a heterogeneous system, wherein each of said agents is configured to process the received values in an entity-independent manner;

storing in a datastore, values for the processed metrics, each value being associated with an identifier used to record a time at which the corresponding value was measured which is also stored in said datastore;

identifying a previously occurring network event involving components associated with the at least one agent;

determining a time range applicable for the previously occurring network event;

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retrieving said stored values from said datastore for the network event that have associated identifiers specifying times within the determined time range; and

displaying said retrieved values for selected ones of said predefined metrics for sequential playback on a graphical display, wherein said sequential playback indicates previously occurring interactions among components in the heterogeneous system.

6. (Previously Presented) The method according to claim 5, wherein said storing step, comprises storing said values sequentially in time as said values are collected along with data for temporally coordinating interactions among the components.

7. (Previously Presented) The method according to claim 5, wherein said retrieving step, comprise:

accessing stored values in said datastore;

determining a starting time and an ending time for which said stored values are to be retrieved; and

acquiring said sequentially stored values from said starting time to said ending time.

8. (Previously Presented) The method according to claim 5, wherein said step of displaying said retrieved values, comprises:

selecting at least one of the metrics for display for selected ones of said components; and

providing a graphical display of said selected metrics, said display sequentially changing according to changes in said acquired values caused by changes in the stored dynamic data space.

9. (Previously Presented) The method according to claim 5, further comprising controlling said sequentially changing graphical display by selecting a playback function

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from the group consisting of playing, forwarding, fast forwarding, rewinding, fast rewinding, pausing, stepping and stopping.

10. (Currently Amended) A system for post-analyzing and visualizing predefined data metrics for at least one of a plurality of communication components in a heterogeneous system, the system comprising:

at least one agent configured to gather and process metrics from a plurality of communication components in a component-independent fashion;

a datastore for storing values from agents, each stored value being associated with an identifier used to record a time at which the corresponding value was measured which is also stored in said datastore; and

a graphical interface for sequentially playing back and viewing component interactions and related data provided by the agents, wherein the agents are configured to selectively utilize the datastore and the communication components as information sources, wherein when the datastore is utilized as an information source, previously occurring network events are presented in the graphical interface by selectively retrieving values from the datastore based upon how the indicators associated with the values compare to a time of the previously occurring network events.

11. (Currently Amended) The system according to claim 25, wherein said datastore, comprises a storage for storing said values, wherein said values are as said values are collected and presented in real-time upon the graphical interface in addition to being stored within said data store.

12. (Currently Amended) The system according to claim 10, wherein said computing device, comprises:

a processor for accessing stored values in said datastore;

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a processing means for determining a starting time and an ending time of said stored values to be retrieved; and

a second processing means for acquiring said sequentially stored values that have associated identifiers specifying times [[from]] between said starting time to said ending time.

13. (Previously Presented) The system according to claim 10, further comprising:
means for selecting at least one of the metrics for display for selected ones of said communication component; and
a graphical display for displaying said selected metrics, said display sequentially changing according to changes in said acquired values caused by changes in the stored dynamic data space.

14. (Previously Presented) The system according to claim 10, further comprising a user interface for controlling said sequentially changing graphical display by selecting a playback function from the group consisting of playing, forwarding, fast forwarding, rewinding, fast rewinding, pausing, stepping and stopping function.

15. (Currently Amended) A machine readable storage having stored thereon, a computer program having a plurality of code sections for post-analyzing and sequentially visualizing a plurality of predefined metrics in a stored dynamic data space, said code sections executable by a machine for causing the machine to perform the steps of:

storing in a datastore, values corresponding to [[the]] predefined metrics received from an agent, each of said values representing a characteristic of one of a plurality of entities in a data space, wherein data for temporally coordinating interactions among the entities is also stored in the datastore, wherein said data for temporally coordinating

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interactions comprises for each of said values an identifier used to record a time at which the corresponding value was measured;

detecting an analysis event that indicates that a post-performance analysis is to be performed for a designated time;

determining a time range applicable for the designated time;

retrieving said stored values from said datastore that have associated identifiers specifying times within the determined time range; and

displaying said retrieved values for selected ones of said predefined metrics for sequential viewing, on a graphical display, previously occurring network events involving the entities, wherein the displaying step utilizes previously stored temporal data to display interactions among at least a portion of the entities in a time sequenced manner.

16. (Previously Presented) The machine readable storage according to claim 15, wherein said storing step, comprises storing said values for the predefined metrics sequentially in time as said values are collected.

17. (Currently Amended) The machine readable storage according to claim 15, said determining step further comprising the steps of:

determining a starting time for the time range and an ending time for the time range.

~~wherein said retrieving step, comprises:~~

~~accessing values in said datastore;~~

~~determining a starting time and an ending time of said stored values to be retrieved;~~

and

~~acquiring said sequentially stored values from said starting time to said ending time.~~

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18. (Previously Presented) The machine readable storage according to claim 15, wherein an interface utilized by the displaying step to display the previously occurring network events is configured to display network events in real-time.

19. (Previously Presented) The machine readable storage according to claim 15, further comprising controlling said sequentially changing graphical display by selecting a playback function from the group consisting of playing, forwarding, fast forwarding, rewinding, fast rewinding, pausing, stepping and stopping.

20. (Currently Amended) A machine readable storage having stored thereon, a computer program having a plurality of code sections for post-analyzing and visualizing predefined metrics for at least one of a plurality of distributed components in a heterogeneous system, said code sections executable by a machine for causing the machine to perform the steps of:

at least one software agent retrieving and processing predefined metrics, each metric representing a characteristic of a component in a heterogeneous system, wherein each of said agents is configured to process the received values in an entity-independent manner;

storing in a datastore, values for the processed metrics, each value being associated with an identifier used to record a time at which the corresponding value was measured which is also stored in said datastore;

identifying a previously occurring network event involving components associated with the at least one agent;

determining a time range applicable for the previously occurring network event;

retrieving said stored values from said datastore for the network event that have associated identifiers specifying times within the determined time range; and

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displaying said retrieved values for selected ones of said predefined metrics for sequential playback on a graphical display, wherein said sequential playback indicates previously occurring interactions among components in the heterogeneous system.

21. (Previously Presented) The machine readable storage according to claim 20, wherein said storing step, comprises storing said values sequentially in time as said values are collected along with data for temporally coordinating interactions among the components.

22. (Previously Presented) The machine readable storage according to claim 20, wherein said retrieving step, comprises:

accessing stored values in said datastore;

determining a starting time and an ending time for which said stored values are to be retrieved; and

acquiring said sequentially stored values from said starting time to said ending time.

23. (Previously Presented) The machine readable storage according to claim 20, wherein said step of displaying said retrieved values, comprises:

selecting at least one of the metrics for display for selected ones of said components; and

providing a graphical display of said selected metrics, said display sequentially changing according to changes in said acquired values caused by changes in the stored dynamic data space.

24. (Previously Presented) The machine readable storage according to claim 20, further comprising controlling said sequentially changing graphical display by selecting a

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playback function from the group consisting of playing, forwarding, fast forwarding, rewinding, fast rewinding, pausing, stepping, and stopping.

25. (Previously Presented) The system according to claim 10, wherein when the communication components are utilized as information sources, network events are presented in the graphical interface in real-time.